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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BOX PATENT APPLICATION

Hon. Assistant Commissioner
for Patents
Washington, D.C. 20231

Re: Inventors: BRIAN M. DUGAN
Title: METHODS AND APPARATUS FOR MONITORING AND ENCOURAGING HEALTH AND FITNESS
Serial No.: Unknown
Filed: HEREWITH
Examiner: Unknown
Group Art Unit: Unknown

Transmitted herewith is:

Specification, claims and abstract (13) pages
 Formal drawings (2 sheets)
 Executed Combined Declaration and Power of Attorney (2pp)
 Verified Statement Claiming Small Entity Status
 Dugan & Dugan check in the amount of \$~~355.00~~^{435.00} for filing fees

FEE CALCULATION

Total Claims	20	- 20 =	-0-	X \$9.00	\$0.00
Independent Claims	5	- 3 =	-2-	X \$40.00	\$80.00
Basic Filing Fee				\$355.00	\$0.00
TOTAL FEES					\$435.00

A check in the amount of \$435.00 is enclosed for payment of the above identified fees.
 The Commissioner is hereby authorized to charge \$0.00 to Deposit Account No. 04-1696.
 The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 04-1696. A duplicate copy of this transmittal is enclosed.

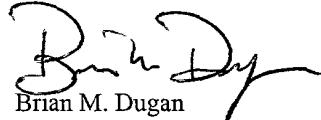
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Date of Deposit: 10/30/00

Signature: Brian Dugan

Respectfully submitted,


Brian M. Dugan
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Applicant or Patentee: Brian M. Dugan
 Serial or Patent No.: UNKNOWN
 Filed or Issued: HEREWITH
 For: METHODS AND APPARATUS FOR MONITORING AND ENCOURAGING
HEALTH AND FITNESS

VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY
 STATUS (37 C.F.R. 1.9(f) AND 1.27(b)) - INDEPENDENT INVENTOR

As a below named inventor, I hereby declare that I qualify as an independent inventor as defined in 37 C.F.R. 1.9(c) for purposes of paying reduced fees under Section 41(a) and (b) of Title 35, United States Code, to the Patent and Trademark Office with regard to the invention entitled METHODS AND APPARATUS FOR MONITORING AND ENCOURAGING HEALTH AND FITNESS described in:

The specification filed herewith
 Application Serial No. _____, filed _____
 Patent No. _____, issued _____

I have not assigned, granted, conveyed or licensed and am under no obligation under contract or law to assign, grant, convey or license, any rights in the invention to any person who could not be classified as an independent inventor under 37 C.F.R. 1.9(c) if that person had made the invention, or to any concern which would not qualify as a small business concern under 37 C.F.R. 1.9(d) or a nonprofit organization under 37 C.F.R. 1.9(e).

Each person, concern or organization to which I have assigned, granted, conveyed, or licensed or am under an obligation under contract or law to assign, grant, convey, or license any right in the invention is listed below:

No such person, concern, or organization
 Persons, concerns or organizations listed below*

*Note: Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities. (37 C.F.R. 1.27)

FULL NAME _____

ADDRESS _____
 INDIVIDUAL SMALL BUSINESS CONCERN NONPROFIT ORGANIZATION

FULL NAME _____

ADDRESS _____
 INDIVIDUAL SMALL BUSINESS CONCERN NONPROFIT ORGANIZATION

FULL NAME _____

ADDRESS _____

INDIVIDUAL SMALL BUSINESS CONCERN NONPROFIT ORGANIZATION
I acknowledge the duty to file, in this application or patent,
notification of any change in status resulting in loss of
entitlement to small entity status prior to paying, or at the
time of paying, the earliest of the issue fee or any maintenance
fee due after the date on which status as a small entity is no
longer appropriate. (37 C.F.R. 1.28(b))

I hereby declare that all statements made herein of my own
knowledge are true and that all statements made on information
and belief are believed to be true; and further that these
statements were made with the knowledge that willful false
statements and the like so made are punishable by fine or
imprisonment, or both, under Section 1001 of Title 18 of the
United States Code, and that such willful false statements may
jeopardize the validity of the application, any patent issuing
thereon, or any patent to which this verified statement is
directed.

Brian M. Dugan

NAME OF INVENTOR

NAME OF INVENTOR

NAME OF INVENTOR



Signature of Inventor

Signature of Inventor

Signature of Inventor

10/30/00

Date

Date

Date

11-01-00

A

APPLICATION FOR UNITED STATES LETTERS PATENT

APPLICANT:

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TITLE:

METHODS AND APPARATUS FOR
MONITORING AND
ENCOURAGING
HEALTH AND FITNESS

DOCKET NO.:

BMD-004

CERTIFICATE OF MAILING UNDER 37 CFR 1.10

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Name of person mailing papers: BRIAN M. DUGAN
Signature Brian Dugan Date 10/30/00

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METHODS AND APPARATUS FOR MONITORING AND
ENCOURAGING HEALTH AND FITNESS

The present application claims priority from U.S. Provisional Patent Application Serial No. 60/162,502, filed October 29, 1999, which is hereby incorporated by reference herein in its entirety.

FIELD OF THE INVENTION

The present application relates to methods and apparatus for monitoring and encouraging health and fitness.

BACKGROUND OF THE INVENTION

A fitness craze has recently swept the United States and many other countries. From fat-free potato chips to treadmills, people around the world have become obsessed with weight loss and healthy living. Accordingly, record numbers of new fitness products/exercise equipment have emerged to meet this obsession (including stair climbers, treadmills, recumbent bicycles, ski machines, and the like). However, no convenient mechanism has been developed for monitoring and encouraging health and fitness.

SUMMARY OF THE INVENTION

To overcome the needs of the prior art, methods and apparatus are provided for monitoring and encouraging health and fitness. In accordance with a first aspect of the invention, an apparatus is provided that is adapted to assist in weight loss and exercise. The apparatus comprises a personal digital assistant (PDA) having computer program code adapted to assist in at least one of calorie counting, meal selection, meal suggestion, weight monitoring, weight loss or gain monitoring, fat consumption monitoring, sugar consumption monitoring and salt consumption monitoring. The

DRAFTING™ EXPRESSIONS

PDA also includes computer program code adapted to display historical data regarding at least one of calorie counting, meal selection, meal suggestion, weight monitoring, weight loss or gain monitoring, fat consumption monitoring, sugar consumption monitoring and salt consumption monitoring. Numerous other embodiments are provided, as are methods, systems and computer program products. Each computer program product may be carried by a medium readable by a computer (e.g., a carrier wave signal, a floppy disc, a hard drive, a random access memory, etc.).

Other objects, features and aspects of the present invention will become more fully apparent from the following detailed description of the preferred embodiments, the appended claims and the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a schematic diagram of an exemplary system for monitoring and encouraging health and fitness; and

FIG. 2 is a flowchart of a first exemplary process of the system of FIG. 1.

DETAILED DESCRIPTION

FIG. 1 is a schematic diagram of an exemplary system 100 for monitoring and encouraging health and fitness. The system 100 includes a server 102 that may communicate with one or more user devices 104a-n via a network 106. As shown in FIG. 1, a grocery store 108 may also be in communication with the server 102 and/or with one or more of the user devices 104a-n via the network 106. Any other party such as a restaurant, a catering service, and/or any other relevant person or entity may be in communication with the server 102 in addition to, or in place of the

grocery store 108. It will be understood that devices in communication need not be in continuous communication and actually may refrain from exchanging data/information most of the time. Additionally, devices may be in communication even though one or more steps must be performed before the devices may communicate (e.g., dialing a network service provider, connecting to a network service provider, logging onto a Web site, etc.).

The server 102 may comprise any conventional server (e.g., one or more conventional microprocessors) having computer program code contained therein as described below. Each user device 104a-n may comprise a desk top computer, a lap top computer, a set top box, a personal digital assistant (PDA), an internet-capable telephone device and/or any other device capable of communicating with the server 102 via the network 106, and each user device 104a-n may have computer program code contained therein as described below. The network 106 may comprise a local area network (LAN), a wide area network (WAN), the Internet, an intranet, an extranet or any other network. In general one or more of the user devices 104a-n, the grocery store 108, and/or any other relevant third party may communicate with the server 102 or amongst one another via any communications medium (e.g., via telephone, via facsimile, via mail, etc.).

As stated, the server 102 and/or one or more of the user devices 104a-n may contain computer program code adapted to direct the server 102 and/or the one or more user devices 104a-n in accordance with one or more embodiments of the invention.

FIG. 2 is a flowchart of a first exemplary process 200 of the system 100. With reference to FIG. 2, in step 202, the process 200 begins. In step 204, the server 102 receives information about a user. For example, if the

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server 102 is a Web server, the user may employ one of the user devices 104a-n to log-on to a Web site administered by the server 102, and to provide information to the server 102. Relevant information may include any type of demographic information (e.g., age, weight, height, sex, etc.), geographic/address information (e.g., where the user lives, contact information, etc.), goals or objectives of the user (e.g., weight loss, healthier diet, exercise objectives, etc.) or any other relevant information. In general, information about the user may be provided to the server 102 by any mechanism (e.g., via mail, via e-mail, via telephone, via cellular telephone, via facsimile, etc.). For example, information may be received via one or more HTTP transmissions or via some other communications protocol.

In step 206, the server 102 monitors the performance of the user (e.g., receives information from one or more of the user devices 104a-n about the user's food intake and/or exercise level and/or generates historical information about the user's performance). In step 208, the server 102 provides feedback to the user based on the monitored performance of the user (e.g., encouragement to exercise more, not to eat certain foods, to eat certain foods, etc.). The feedback may be provided at any time (e.g., periodically, randomly, etc.) and by any means (e.g., via mail, via e-mail, via facsimile, via telephone, etc.).

In step 210, the user (optionally) may employ one or more of the user devices 104a-n to order groceries from the grocery store 108 (e.g., in accordance with the dietary goals of the user). For example, the system 100 may be configured so as to:

maintain on a PDA a list of grocery items purchased by a shopper;

display on the PDA at least one of the grocery items within the maintained list of grocery items;

allow selection of one or more of the displayed previously purchased grocery items;

display at least one of the grocery items within the maintained a list of grocery items based on prior use patterns of the shopper;

display a message that indicates that, based on prior use patterns of the shopper, at least one of the grocery items within the maintained list of grocery items should be purchased by the shopper;

e-mail the shopper;

display on a PDA a list of user-selectable grocery items;

allow selection of at least one of the displayed selectable grocery items;

display at least one characteristic of a selected grocery item (e.g., a characteristic selected from the group consisting of calories, fat content, salt content, cholesterol content, whether organically grown, whether low fat, whether suitable for diabetics, whether Kosher, price, size, shelf life and brand name);

display a comparison of at least one characteristic of a plurality of selected grocery items;

allow selection of the at least one characteristic.

rank a plurality of selected grocery items based on the at least one characteristic.

maintain on a PDA a list of grocery items purchased by a shopper;

generate a report based on the list of purchased grocery items;

generate a report selected from the group consisting of calorie consumption, fat

consumption, sugar consumption, salt consumption and grocery cost;

e-mail a report;

generate a report periodically;

display on a PDA a list of prepared foods;

allow selection of at least one prepared food;

display a recipe for each selected prepared food;

display at least one user-selectable grocery item that is an ingredient of the recipe;

display the cost of preparing each selected prepared food based on the cost of user-selected ingredients.

display at least one user-selectable ingredient for the recipe based on a maintained list of grocery items purchased by a shopper;

display a date when each user-selected ingredient was previously purchased by the shopper; and/or

provide a link to a food preparation WEB site capable of generating a price quotation for the preparation of at least one selected prepared food.

In step 212, the process 200 ends.

The foregoing description discloses only exemplary embodiments of the invention, modifications of the above disclosed apparatus and method which fall within the scope of the invention will be readily apparent to those of ordinary skill in the art. For instance, in at least one embodiment of the invention, one or more of the user devices 104a-n is a personal digital assistant (PDA) having an application (e.g., computer program code) adapted to assist in calorie counting (e.g., keeping track of caloric intake), meal selection, meal suggestion, weight monitoring (e.g., via user entry or via a download from an electronic scale),

weight loss or gain monitoring, fat consumption monitoring, sugar consumption monitoring and salt consumption monitoring. The one or more PDAs may include computer program code adapted to display historical data regarding at least one of calorie counting, meal selection, meal suggestion, weight monitoring, weight loss or gain monitoring, fat consumption monitoring, sugar consumption monitoring and salt consumption monitoring.

Exercise suggestions, exercise statistics (e.g., time exercised, distance run, type of exercise performed, historical data, etc.) may be stored/accessible via one or more of the user devices 104a-n. The information may be stored locally (e.g., within the PDA) or remotely (e.g., within the server 102). Additionally, a pulse monitor or other monitor may be provided that interfaces the PDA (e.g., by modifying the PDA if necessary to allow such an interface) and that automatically provides exercise information and/or calories-burned information to the PDA. A comparison of calorie intake versus calories burned may be automatically generated at any time (e.g., after a meal, at the end of the day, after exercise, etc.). Inspirational messages may be displayed (e.g., during exercise, prior to meal time, automatically if desired, etc.) to help with weight loss/exercise performance. Each PDA may be provided with a video game such as described in U.S. Patent No. 5,947,868 (which is hereby incorporated by reference in its entirety) to further inspire exercise.

Each PDA may store, for example, grocery lists and may download information from a WEB site regarding suitable meals, products, etc., that are consistent with a user's diet and exercise goals. The WEB site may include a health food line such as WEIGHT WATCHER'S™, or any of the other grocery concepts described herein.

Accordingly, while the present invention has been disclosed in connection with the preferred embodiments thereof, it should be understood that other embodiments may fall within the spirit and scope of the invention, as defined by the following claims.

WHAT IS CLAIMED IS:

1. An apparatus adapted to assist in weight loss and exercise comprising:

 a personal digital assistant (PDA) having computer program code adapted to:

 assist in at least one of calorie counting, meal selection, meal suggestion, weight monitoring, weight loss or gain monitoring, fat consumption monitoring, sugar consumption monitoring and salt consumption monitoring; and

 display historical data regarding at least one of calorie counting, meal selection, meal suggestion, weight monitoring, weight loss or gain monitoring, fat consumption monitoring, sugar consumption monitoring and salt consumption monitoring.

2. A computer-based method of grocery shopping comprising:

 maintaining on a PDA a list of grocery items purchased by a shopper; and

 displaying on the PDA at least one of the grocery items within the maintained list of grocery items.

3. The method of claim 2 further comprising:

 allowing selection of one or more of the displayed previously purchased grocery items.

4. The method of claim 2 wherein displaying at least one of the grocery items within the maintained list of grocery items comprising displaying at least one of the grocery items within the maintained list of grocery items based on prior use patterns of the shopper.

5. The method of claim 2 further comprising:
displaying a message that indicates that,
based on prior use patterns of the shopper, at least one of
the grocery items within the maintained list of grocery
items should be purchased by the shopper.

6. The method of claim 5 wherein displaying a
message that indicates that, based on prior use patterns of
the shopper, at least one of the grocery items within the
maintained list of grocery items should be purchased by the
shopper comprises e-mailing the shopper.

7. A computer-based method of grocery shopping
comprising:
displaying on a PDA a list of user-selectable
grocery items;
allowing selection of at least one of the
displayed selectable grocery items; and
displaying at least one characteristic of a
selected grocery item.

8. The method of claim 7 wherein the at least
one characteristic comprises a characteristic selected from
the group consisting of calories, fat content, salt content,
cholesterol content, whether organically grown, whether low
fat, whether suitable for diabetics, whether Kosher, price,
size, shelf life and brand name.

9. The method of claim 7 further comprising:
displaying a comparison of at least one
characteristic of a plurality of selected grocery items.

10. The method of claim 9 further comprising:

allowing selection of the at least one characteristic.

11. The method of claim 7 further comprising:
ranking a plurality of selected grocery items
based on the at least one characteristic.

12. A computer-based method of grocery shopping
comprising:

maintaining on a PDA a list of grocery items
purchased by a shopper; and

generating a report based on the list of
purchased grocery items.

13. The method of claim 12 wherein generating a
report based on the list of purchased grocery items
comprises generating a report selected from the group
consisting of calorie consumption, fat consumption, sugar
consumption, salt consumption and grocery cost.

14. The method of claim 12 wherein generating a
report based on the list of purchased grocery items
comprises e-mailing a report.

15. The method of claim 12 wherein generating a
report based on the list of purchased grocery items
comprises generating a report periodically.

16. A computer-based method of grocery shopping
comprising:

displaying on a PDA a list of prepared foods;
allowing selection of at least one prepared
food;

displaying a recipe for each selected prepared food; and

displaying at least one user-selectable grocery item that is an ingredient of the recipe.

17. The method of claim 16 comprising:
displaying the cost of preparing each
selected prepared food based on the cost of user-selected
ingredients.

18. The method of claim 16 wherein displaying at least one user-selectable ingredient for the recipe comprises displaying at least one user-selectable ingredient for the recipe based on a maintained list of grocery items purchased by a shopper.

19. The method of claim 18 further comprising displaying a date when each user-selected ingredient was previously purchased by the shopper.

20. The method of claim 17 further comprising:
providing a link to a food preparation WEB
site capable of generating a price quotation for the
preparation of at least one selected prepared food.

ABSTRACT

Methods and apparatus are provided for monitoring and encouraging health and fitness. In accordance with a first aspect, an apparatus is provided that is adapted to assist in weight loss and exercise. The apparatus comprises a personal digital assistant (PDA) having computer program code adapted to assist in at least one of calorie counting, meal selection, meal suggestion, weight monitoring, weight loss or gain monitoring, fat consumption monitoring, sugar consumption monitoring and salt consumption monitoring. The PDA also includes computer program code adapted to display historical data regarding at least one of calorie counting, meal selection, meal suggestion, weight monitoring, weight loss or gain monitoring, fat consumption monitoring, sugar consumption monitoring and salt consumption monitoring. Numerous other embodiments are provided, as are methods, systems and computer program products.

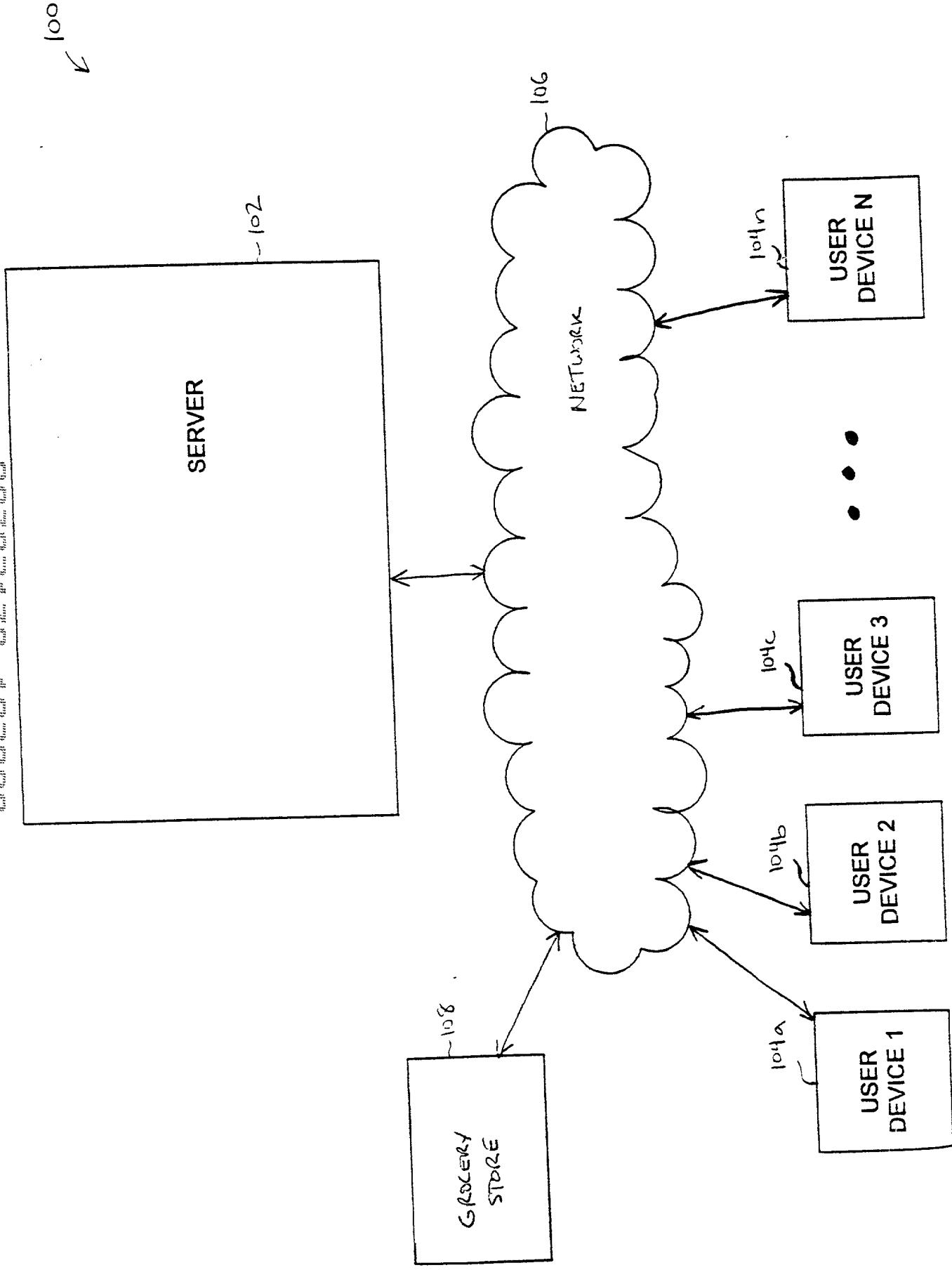


FIG. 1

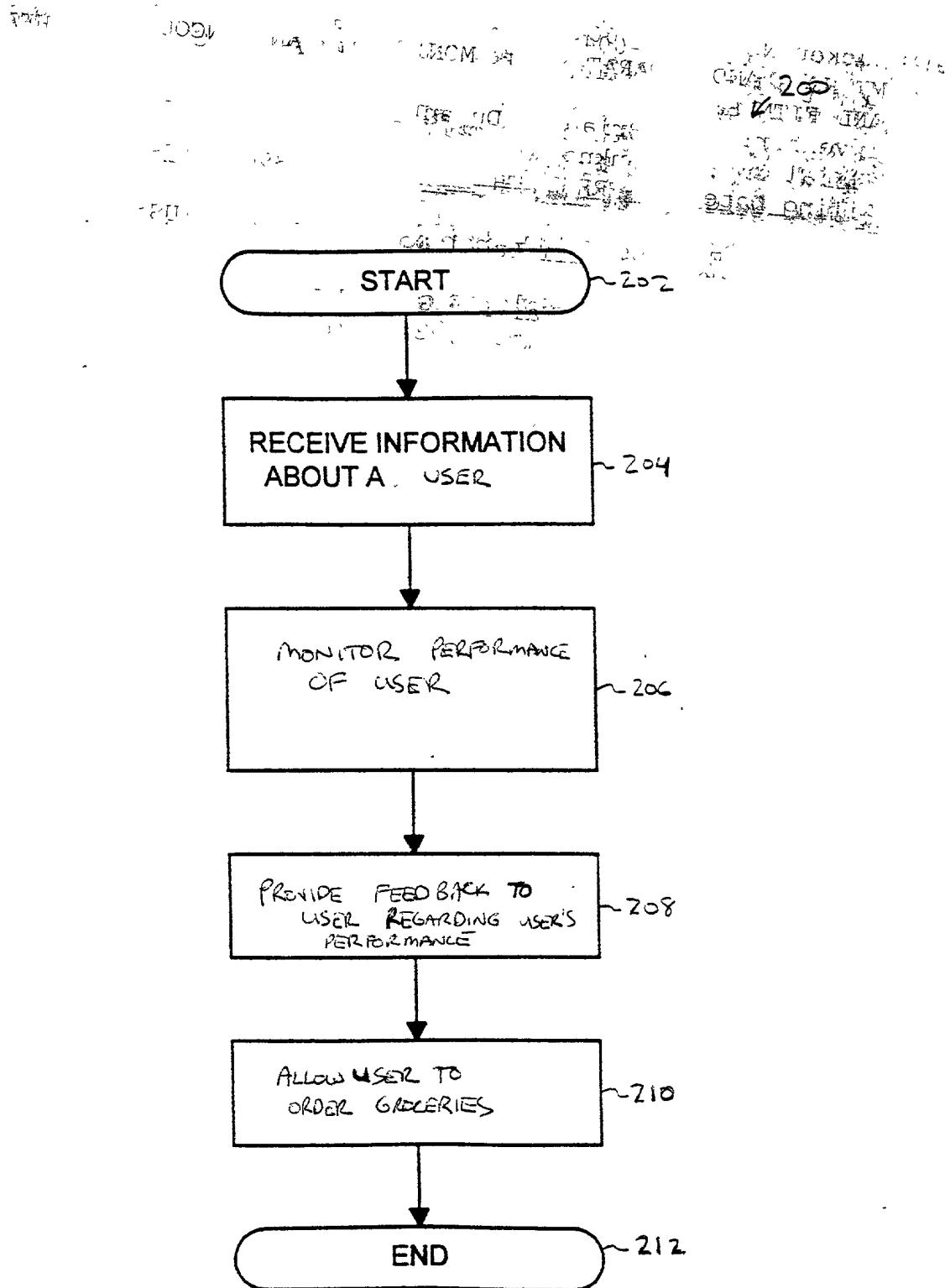


FIG. 2

Declaration and Power of Attorney for Patent Application

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name. I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

METHODS AND APPARATUS FOR MONITORING AND ENCOURAGING HEALTH AND FITNESS

the specification of which (check one)

X

is attached hereto.

was filed on _____ as United States Application Serial No. or PCT International Application No. _____ and was amended on _____ (if applicable).

I hereby state that I have reviewed and understand the contents of the above- identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the patentability as defined in 37 CFR §1.56.

I hereby claim foreign priority benefits under 35 U.S.C. §119(a)-(d) or §365(b) of any foreign application(s) for patent or inventor's certificate, or §365(a) of any PCT International application which designated at least one country other than the United States, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or PCT International application having a filing date before that of the application on which priority is claimed:

Prior Foreign Application(s):			
Number	Country	Day/Month/Year	Priority Claimed

I hereby claim the benefit under 35 U.S.C. §119(e) of any United States provisional application(s) listed below.

Application Number	Filing Date
60/162,502	October 29, 1999

I hereby claim the benefit under 35 U.S.C. §120 of any United States application(s), or §365© of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. §112, I acknowledge the duty to disclose information material to patentability of this application as defined in 37 CFR §1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application:

Prior U.S. Applications:	
Serial No.	Filing Date
	Status (patented, pending, abandoned)

I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith:

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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

(1) Inventor: BRIAN M. DUGAN


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Signature: 
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